Use Attainability Analysis

for

WBID 1218 North Deepwater Creek

Submitted by SES Inc.

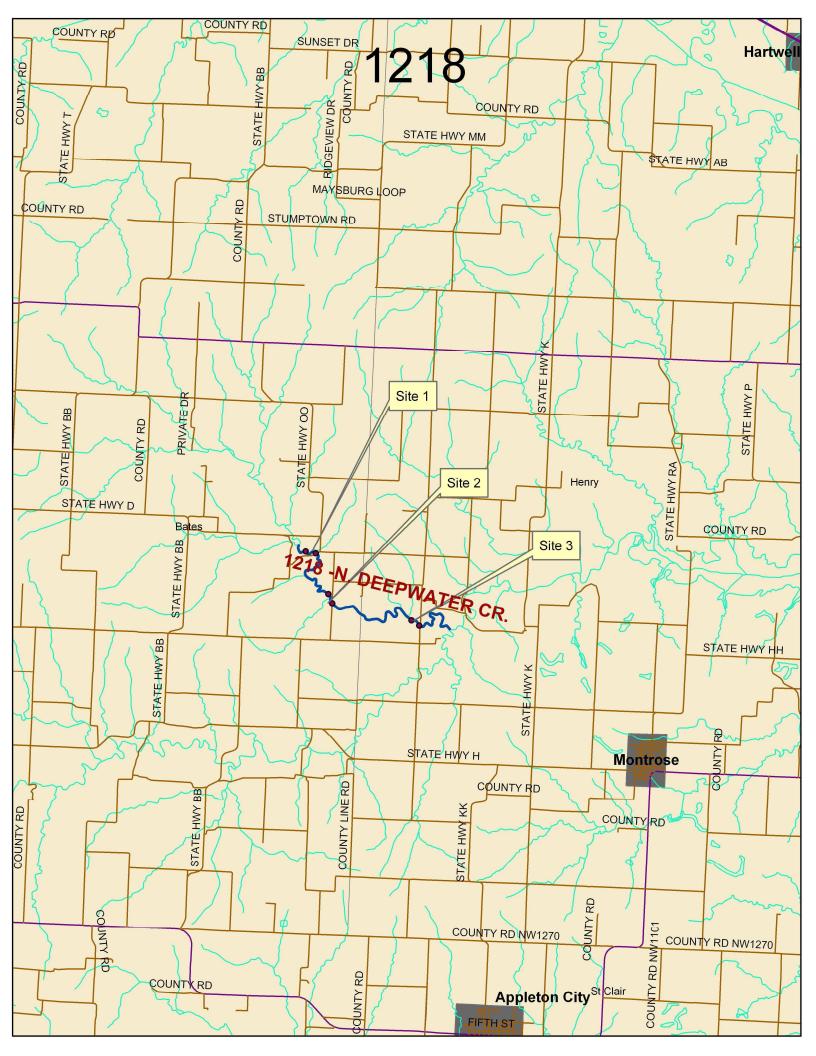
to Missouri Department of Natural Resources Water Protection Program

Date received: November 14, 2007

Field Data Sheets for Recreation Use Stream Surveys

Data Sheet A - Water Body Identification

I. Water Body Information (For water body being	g surveyed)
Water Body Name (from USGS 7.5' quad):	
Deepwater Creek	
Missouri Water Body Identification (WBID) Number:	
1218	
8 digit HUC code:	County:
10290108	Bates/Henry
Upstream Legal Description (from Table H):	
T41N R29W Sec 35	
Downstream Legal Description (from Table H):	
T40N R28W Sec 5	
Number of sites evaluated:	
3	
List all site numbers, listed consequently upstream to do	wnstream:
1,2,3	
Site Locations Map(s): Attach a map of the entire segn	ent with assessment sites clearly labeled.
Mark any other items that may be of interest.	
II. Facility Information (list all permitted discharges to the	ne water body segment)
Facility Name(s) and Permit Number(s):	
Ballard R-11 School WWTF	
MO 0129321	
III. UAA Surveyor (please print legibly)	
Name of Surveyor:	Telephone Number:
Aaron Ball	(913)307-0046
Organization/Employer:	
SES, Inc.	
Please verify that you have completed all sections, o	hecked all applicable boxes, and that the form is
complete.	
r	
Signed: Aaron Ball	Date: 11.09.07



WBID#	1218
Site #	1

Field Data Sheets For Recreatiuonal Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time:		10/24/07	17:47	Site Location	Site Location Description (e.g. road crossing):					
Personnel:		Aaron Ball, Drew D	odson		Off of St. Hwy D					
Current Weat	her Con	ditions: clear		Facility Nar	acility Name: Ballard R-11 School WWTF					
Weather cond	litions fo	or the past 10 days:	2.17 inches	Permit Nun	ermit Number: MO 0129321					
Drought cond	itions?: I	No drought ☑ ; Pha	se I □ ; Phase	II □ ; Phas	e III □ ; PI	hase IV □ ; Ur	nknown □			
			·	·						
Site Location										
		(Universal Transver	se Mercator Pr	rojection, In	Meters					
Site 01	Easting	g (UTM X):	Northing (UTN	И Y):		Horizontal Ac	ccuracy:	Meters		
	040473	33	4240659			9.	.0			
Site 11	Easting	g (UTM X):	Northing (UTM Y):			Horizontal Ac	ccuracy:	Meters		
	040500	,	4240607	•			7.	2		
12 10007										
Photos:	•		 	, 		·	<u> </u>			
Photo ID#	Photo Purpose		Photo ID#:	Photo Purpose		Photo ID#:	Photo Purpose)		
18	Downs	tream	19	Upstream						
Photo ID#	F	Photo Purpose	Photo ID#	Photo Purpose		Photo ID#	Photo Purpose)		
					_					
Photo ID#	F	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose			
Uses Observ	ed:									
☐ Swimming	J	☐ Skin diving	☐ SCUBA di	iving	☐ Tubin	g	☐ Water Skiing			
☐ Wind surfi	ng	☐ Kayaking	☐ Boating		□ Wadir	ng	☐ Rafting			
☐ Hunting		☐ Trapping	☐ Fishing		✓ None	of the above	☐ Other:			
Describe:		, ,, ,,	<u>, </u>		ı					

WBID#	1218
Site #	1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

- " - "				
Surrounding Condition				'
☐ City/County parks	□ playgrounds	☐ MDC conservation lands		☑ Rural Residential
☐ Campgrounds	☐ State parks	☐ National Forests	☐ Nature trails	☐ Stairs/walkways
☐ Boating accesses	☐ Fence	□ No tresspass sign	☐ Steep Slopes	☐ Other:
Comments:				
none				
= !!				
Evidence of Human l		·	T =	·
□ Roads	☐ Foot path/prints	☐ Dock/platform	☐ Camping Sites	☐ Rope swings
☐ RV/ATV Tracks	☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	☐ Livestock watering
comments/other:	none			
				l de la companya de
C 1 (t = 4 -)				
Substrate:		0/ 0//		2/2
Substrate: % Cobble		% Sand % Silt	% Mud/0	
	% Gravel 50	% Sand % Silt	% Mud/0 50	
% Cobble		% Sand % Silt		
% Cobble Aquatic Vegatation:		% Sand % Silt		
% Cobble		% Sand % Silt		
% Cobble Aquatic Vegatation:		% Sand % Silt		
% Cobble Aquatic Vegatation:		% Sand % Silt		
% Cobble Aquatic Vegatation:		% Sand % Silt		
% Cobble Aquatic Vegatation: none	50	% Sand % Silt		
% Cobble Aquatic Vegatation: none Water Characteristics	50 s:		50	
% Cobble Aquatic Vegatation: none Water Characteristic: Odor:	50 -s: □ Sewage	□ Musky □ Chen	50 nical ☑ N	None □ Other:
% Cobble Aquatic Vegatation: none Water Characteristics	50 s:		50 nical ☑ N	None □ Other: Milky ☑ Other:
% Cobble Aquatic Vegatation: none Water Characteristic: Odor: Color:	50 s: Sewage Clear	□ Musky □ Chen	mical ☑ N	None ☐ Other: Milky ☑ Other: Murky
% Cobble Aquatic Vegatation: none Water Characteristic: Odor:	50 -s: □ Sewage	□ Musky □ Chen	mical ☑ N sediments ☑ N	None □ Other: Milky ☑ Other:

WBID # 1218 Site # 1

Organization: SES, Inc.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreation

	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
	` '				
	cord any additional comments	here.)			
ne					
					£ !-
	u have completed all s	ections, checke	d all applicable	boxes, and that the	form is
	u have completed all s	ections, checke	d all applicable	boxes, and that the	form is
ease verify that yo omplete. erveyor's Signature:		ections, checke		boxes, and that the 10/24/2007	form is

Position: Field Team Leader

Field Data Sheets for Recreational Use Stream Surveys Data Sheet C - Field Survey Results

																		Disso	Ived Ox	ygen		
	Waterbo	ody ID:	1218		i	Site #:	1		i							Date:	10/24/07	7		Time:	17:50	
	Estimate	ed Chann	nel Incisi	on:	3.0	(m) (hei	ght betw	een low b	ank wid	th and wa	ater)					'						
	GPS Lo	cation - I	Easting (UTM X)	, Northir	ng (UTM	Y), Hor	izontal Ac	curacy I	Estimate	(EPE / P	DOP / FO	OM)				3301704	Oxygen.		0.7	(IIIg/L)	
		UTM X		0404733			UTM Y:		424065		ī	+/-	9	(meters)		Di	ssolved	Oxygen:			(% sat)	
	11	UTM X	:	0405005	5	•	UTM Y:		424060	7	•	+/-	7.2	(meters)			Cnasif	io Condi			(uC/am)	
	Average	Stream	Width:				7	(meters)	L	ength of	Survey S	Segment:		150	(meters)		Specif	ic Colla.			(μο/спі)	
		ermne Le							(2	20x avera	ge strear	n width)				Wa	ter Temp	perature:		11.8	(°C)	
	Fiel	d Staff:				Aaron E	Ball, Drev	v Dodson						_								
										Tra	nsect C	ross-Se	ction									
		1)2	0)3		04	()5)6		07	0	8	0	9	1	0	11	1
Station	Distance (m)		Distance (m)		Distance (m)		Distance (m)		Distance (m)		Distance (m)		Distance		Distance (m)		Distance (m)		Distance (m)		Distance	
Left Bank	0	Depth (m)	0	Depth (m)	0	Depth (m)	0	Depth (m)	0	Depth (m)	0	Depth (m)	0	Depth (m)	0	Depth (m)	0	Depth (m)	0	Depth (m)	0	Depth (m)
Leit Dalik		-	-	_			-					_	,				-	-	-	-		
1	0.5		0.7	0.20		0.05	0.8										0.2	0.15	0.2	0.15	0.2	0.10
2	1.0	0.15	1.4	0.20	0.2	0.05	1.6	0.75	0.8	0.40	1.2	0.60	1.0	0.30	0.8	0.20	0.4	0.15	0.4	0.20	0.4	0.10
3	1.5	0.25	2.1	0.30	0.3	0.05	2.4	0.75	1.2	0.40	1.8	0.90	1.5	0.50	1.2	0.20	0.6	0.15	0.6	0.20	0.6	0.10
4	2.0	0.40	2.8	0.55	0.4	0.05	3.2	0.90	1.6	0.40	2.4	0.90	2.0	0.40	1.6	0.20	0.8	0.10	0.8	0.25	0.8	0.15
5	2.5	0.50	3.5	0.75	0.5	0.05	4.0	0.95	2.0	0.30	3.0	0.90	2.5	0.60	2.0	0.15	1.0	0.10	1.0	0.20	1.0	0.15
6	3.0	0.60	4.2	0.90	0.6	0.05	4.8	0.70	2.4	0.40	3.6	0.80	3.0	0.60	2.4	0.30	1.2	0.10	1.2	0.15	1.2	0.10
7	3.5	0.55	4.9	1.00	0.7	0.05	5.6	0.70	2.8	0.40	4.2	0.65	3.5	0.45	2.8	0.20	1.4	0.10	1.4	0.15	1.4	0.10
8	4.0	0.40	5.6	1.00	0.8	0.05	6.4	0.60	3.2	0.40	4.8	0.40	4.0	0.35	3.2	0.25	1.6	0.10	1.6	0.15	1.6	0.10
9	4.5	0.20	6.3	1.00	0.9	0.05	7.2	0.35	3.6	0.30	5.4	0.30	4.5	0.30	3.6	0.20	1.8	0.10	1.8	0.10	1.8	0.05
ight Bank	5.0	0.00	7.0	0.00	1.0	0.00	8.0	0.00	4.0	0.00	6.0	0.00	5.0	0.00	4.0	0.00	2	0.00	2.0	0.00	2.0	0.00
eature Type																						
iffle, run, or poo	ı po	ool	po	ool	rif	fle	p	ool	po	ool	po	ool	p	ool	po	ol	pc	ool	po	ol	po	ol

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Aaron Ball Date: 11.09.07

WBID#	1218
Site #	2

Field Data Sheets For Recreatiuonal Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time:		10/25/07	7:58	Site Location	on Descrip	tion (e.g. road	crossing):		
Personnel:		Aaron Ball, Drew D	odson		CR 14503	3			
Current Weat	her Cond	ditions: clear		Facility Na	me:	Ballard R-11	School WWTF		
Weather cond	litions fo	r the past 10 days:	2.17 inches	Permit Nur	nber:	MO 0129321			
Drought cond	itions?: N	No drought ☑ ; Pha	se I □ ; Phase	II □ ; Phas	e III □ ; P	hase IV □ ; Ur	nknown 🗆		
Site Location	1:								
		(Universal Transver	se Mercator Pi	rojection, In	Meters				
Site 01	Easting	(UTM X):	Northing (UTN	И Y):		Horizontal Accuracy:			
	040545	52	4239241					9.0	
Site 11	Easting	(UTM X):	Northing (UTM Y):			Horizontal Accuracy: Mete			
	040534		4239498			5.7			
0403347 4239490 3.7									
Photos:			T	ı			1		
Photo ID#	F	Photo Purpose	Photo ID#: Photo Purpose			Photo ID#:	Photo Pur	pose	
20	Upstrea	am	21	Downstrea	m				
Photo ID#	F	hoto Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Pur	pose	
Photo ID#	F	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose		
Uses Observ	ed:								
☐ Swimming)	☐ Skin diving	☐ SCUBA di	iving	☐ Tubin	g	☐ Water Skiing]	
☐ Wind surf	ng	☐ Kayaking	☐ Boating		□ Wadir	ng	□ Rafting		
☐ Hunting		☐ Trapping	☐ Fishing		☑ None	of the above	☐ Other:		
Describe:		- 111 3	<u> </u>						

WBID#	1218
Site #	2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Conditi	ons:				
☐ City/County parks	☐ playgrounds	☐ MDC conservatio	on lands 🔲 Urba	an areas	☑ Rural Residential
☐ Campgrounds	☐ State parks	☐ National Forests	☐ Natur	e trails	☐ Stairs/walkways
☐ Boating accesses	☐ Fence	☐ No tresspass sign	n ☐ Steep	Slopes	☐ Other:
Comments:					
none					
Evidence of Human	Haai				
☑ Roads		To Dack/platform	☐ Cami	-ing Sitos	□ Dono owings
☑ Roads ☐ RV/ATV Tracks	☐ Foot path/prints ☐ Fire pit/ring	□ Dock/platform□ NPDES Discharge		ping Sites ng Tackle	☐ Rope swings ☐ Livestock watering
comments/other:	Li Liie biviilid	LI INFUES DISCHARGE	<i>†</i> 🗆 1 1011111	19 Tackie	LIVESTOCK Watering
COmments/outer.					
none					
Substrate:					
% Cobble	% Gravel	% Sand	% Silt	% Mud/C	Clay % Bedrock
	30		30	40	
Aquatic Vegatation:					
none					
Hone					
<u></u>					
Water Characteristic	s:				
Odor:	☐ Sewage	<u> </u>	☐ Chemical	☑ 	None ☐ Other:
Color:	☐ Clear		☐ Gray		Milky ☑ Other:
			-		Murky
Bottom Deposit:			= =: .		
Surface Deposit:	☐ Sludge ☐ Oil		☐ Fine sediments☐ Foam		None ☐ Other:

WBID # 1218 Site # 2

Organization: SES, Inc.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Mo	rphology:	(Record isolated pools or	other features identified during	g the survey that may	support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
Comments: (Please re	cord any additional comments l	nere)			
ione	cord any additional comments i	1010.)			
Please verify that your complete.	ou have completed all s	ections, checke	d all applicable	boxes, and that the f	orm is
Surveyor's Signature:	Aaron Ball		_Date of Survey:	10/25/2007	

Position: Field Team Leader

Field Data Sheets for Recreational Use Stream Surveys Data Sheet C - Field Survey Results

																		Disso	lved Ox	tygen				
	Waterbo	ody ID:	1218			Site #:	2									Date:	10/25/07	,		Time:	8:00			
	Estimate	ed Chann	nel Incisi	on:	3.0	(m) (hei	ght betw	een low b	ank wid	th and wa	ater)					Di	ssolved (Oxygen:		5.9	(mg/L)			
		cation - I UTM X		UTM X) 0405452		-		izontal Ac	-		•			(meters)		Di	ssolved (Oxygen:			(% sat)			
	11	UTM X	:	0405347	7		UTM Y:		423949	8		+/-	5.7	(meters)			Specifi	c Cond:			(µS/cm)			
	Average	Stream	Width:				7	(meters)	L	ength of	Survey S	Segment:		150	(meters)		1	•						
		ermne Le								20x avera	ge strear	n width)				Wa	ter Temp	erature:		10.6	(°C)			
	Fiel	d Staff:			Aaron E	Ball, Drev	w Dodso	n						-										
										Tra	nsect C	ross-Se	ction											
	01 02 03			3		04	()5	0)6		07	08	3	0:	9	1	.0	1	1				
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)		
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1	0.7	0.30	0.7	0.70	0.5	0.35	0.7	0.50	1.0	0.65	0.7	0.50	0.7	0.55	0.6	0.10	0.7	0.60	0.5	0.25	0.7	0.40		
2	1.4	0.75	1.4	1.00	1.0	0.35	1.4	0.70	2.0	1.00	1.4	0.90	1.4	0.80	1.2	0.40	1.4	0.65	1.0	0.30	1.4	0.50		
3	2.1	1.00	2.1	1.00	1.5	0.40	2.1	0.75	3.0	1.00	2.1	1.00	2.1	0.70	1.8	0.50	2.1	0.75	1.5	0.30	2.1	0.50		
4	2.8	1.00	2.8	1.00	2.0	0.40	2.8	0.65	4.0	1.00	2.8	1.00	2.8	0.70	2.4	0.55	2.8	0.70	2.0	0.40	2.8	0.50		
5	3.5	1.00	3.5	1.00	2.5	0.35	3.5	0.60	5.0	1.00	3.5	1.00	3.5	0.60	3.0	0.50	3.5	0.55	2.5	0.65	3.5	0.55		
6	4.2	1.00	4.2	1.00	3.0	0.35	4.2	0.50	6.0	1.00	4.2	1.00	4.2	0.60	3.6	0.50	4.2	0.50	3.0	0.50	4.2	0.65		
7	4.9	1.00	4.9	1.00	3.5	0.30	4.9	0.40	7.0	1.00	4.9	0.85	4.9	0.50	4.2	0.35	4.9	0.40	3.5	0.50	4.9	0.60		
8	5.6	0.80	5.6	1.00	4.0	0.20	5.6	0.40	8.0	1.00	5.6	0.60	5.6	0.45	4.8	0.30	5.6	0.30	4.0	0.40	5.6	0.60		
9	6.3	0.40	6.3	0.60	4.5	0.10	6.3	0.30	9.0	1.00	6.3	0.40	6.3	0.30	5.4	0.20	6.3	0.30	4.5	0.30	6.3	0.40		
Right Bank	7.0	0.00	7.0	0.00	5.0	0.00	7.0	0.00	10.0	0.00	7.0	0.00	7.0	0.00	6.0	0.00	7.0	0.00	5.0	0.00	7.0	0.00		
Feature Type																								
riffle, run, or pool	pc	ool	pc	ool	po	ool	p	ool	po	ool	po	ool	p	ool	poo	ol	po	ol	po	ool	po	ol		

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Aaron Ball Date: 11.09.07

WBID#	1218
Site #	3

Field Data Sheets For Recreatiuonal Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time:		10/25/07	9:04	Site Location	on Descrip	tion (e.g. road	crossing):
Personnel:		Aaron Ball, Drew D	odson		County R	oad	
Current Weat	her Cond	ditions: clear		Facility Nar	me:	Ballard R-11	School WWTF
Weather cond	litions fo	r the past 10 days:	2.17 inches	Permit Nun	nber:	MO 0129321	
Drought cond	itions?: I	No drought ☑ ; Pha	se I □ ; Phase	II □ ; Phas	e <mark>III □ ; P</mark> l	nase IV □ ; Ur	nknown 🗆
Site Location	1:						
		(Universal Transver	se Mercator Pr	rojection, In	Meters		
Site 01	Easting	ı (UTM X):	Northing (UTN	И Y):		Horizontal Ac	ccuracy: Meters
	040761	5	4238773				6.3
Site 11	Easting	ı (UTM X):	Northing (UTN	И <u>Y</u>):		Horizontal Ac	curacy: Meters
	040782	 26	4238634		7.2		
_							
Photos:	ı	_	1	T		T	Γ
Photo ID#	F	Photo Purpose	Photo ID#:	Photo F	Purpose	Photo ID#:	Photo Purpose
22	Downs	tream	23 Upstream				
Photo ID#	F	Photo Purpose	Photo ID# Photo F		Purpose Photo ID#		Photo Purpose
			<u> </u>				
Photo ID#	F	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose
		_					
Uses Observ	ed:						
☐ Swimming]	☐ Skin diving	☐ SCUBA di	iving	☐ Tubing	g	☐ Water Skiing
☐ Wind surfi	ng	☐ Kayaking	□ Boating		□ Wadir	ng	□ Rafting
☐ Hunting		☐ Trapping	☐ Fishing		✓ None	of the above	□ Other:
Describe:							

WBID#	1218
Site #	3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Condition						
☐ City/County parks	□ playgrounds	☐ MDC conserv		☐ Urban are		Rural Residential
☐ Campgrounds	☐ State parks	☐ National Fore		☐ Nature tra		Stairs/walkways
☐ Boating accesses		☐ No tresspass	sign	☐ Steep Slo	pes □	Other:
Comments:						
none						
Evidence of Human U	Use:					
☑ Roads	☐ Foot path/prints	☐ Dock/platform	l	☐ Camping		Rope swings
☐ RV/ATV Tracks	☐ Fire pit/ring	☐ NPDES Disch	narge	☐ Fishing Ta		Livestock watering
comments/other:						
none						
Substrate:						
% Cobble	% Gravel	% Sand	% Silt	%	Mud/Clay	/ % Bedrock
	13		20		65	2
Aquatic Vegatation:						
none						
Water Characteristics	s:					
Odor:	□ Sewage	☐ Musky	☐ Chem	ical	☑ Non	
Color:	☐ Clear	□Green	☐ Gray		☐ Milk	•
						Murky
Bottom Deposit:	□ Sludge	□ Solids		sediments	☑ Non	
Surface Deposit:	□ Oil	☐ Scum	☐ Foam		☑None	e □ Other:

WBID # 1218 Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream I	Morphology:	(Record isolated pools of	r other features identified during	the survey that may	support recreational uses)

	Distance from	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
	access location (m)		 		
				<u> </u>	
omments: (Plassa ra	cord any additional comments I	here)			
one	cord arry additional comments i	11616.)			
III E					
ease verify that yo	ou have completed all s	ections, checke	ed all applicable	boxes, and that the t	form is
	ou have completed all s	ections, checke	ed all applicable	boxes, and that the f	form is
lease verify that yo omplete.	ou have completed all s	ections, checke	ed all applicable	boxes, and that the f	form is
	ou have completed all s	ections, checke	ed all applicable	boxes, and that the f	form is
omplete.					form is
omplete.	ou have completed all so			boxes, and that the f	form is
omplete.					form is
omplete. urveyor's Signature:			_Date of Survey:		form is

Field Data Sheets for Recreational Use Stream Surveys Data Sheet C - Field Survey Results

																		Disso	lved Ox	ygen		
		- ,														Date:	10.25.07	7		Time:	9:05	
				'			_	reen low b								Di	ssolved	Oxygen:		8.1	(mg/L)	
	01	UTM X	:	0407615	5		UTM Y:		423877	3	•	DOP / FO +/- +/-		(meters)	•	Di	ssolved	Oxygen:			(% sat)	
		11 UTM X: 0407826 UTM Y: 4238634 +/- 7.2 (meters) Average Stream Width: 7 (meters) Length of Survey Segment: 150 (meters)								(meters)		Specifi	ic Cond:			(µS/cm)						
		rmne Le					/	(meters)		20x avera	-	-		130	(meters)		ter Temp	perature:		10	(°C)	
	Fiel	d Staff:			Aaron E	Ball, Drev	w Dodsoi	n						·								
										Tra	nsect C	ross-Se	ction									
	01 02 03					04)5		6		07	0	8		9	10		11	1		
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		Distance (m)	Depth (m)		Depth (m)		Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.5	0.40	0.6	0.60	0.6	0.50	0.7	0.40	0.6	0.20	0.7	0.50	0.7	0.60	0.7	0.40	0.6	0.55	0.5	0.60	0.7	0.05
2	1.0	0.55	1.2	1.00	1.2	0.80	1.4	0.50	1.2	0.40	1.4	0.75	1.4	0.95	1.4	0.60	1.2	0.35	1.0	0.60	1.4	0.05
3	1.5	0.85	1.8	1.00	1.8	0.80	2.1	0.60	1.8	0.40	2.1	1.00	2.1	1.00	2.1	0.85	1.8	0.30	1.5	0.55	2.1	0.05
4	2.0	1.00	2.4	1.00	2.4	0.90	2.8	0.80	2.4	0.30	2.8	1.00	2.8	1.00	2.8	1.00	2.4	0.20	2.0	0.50	2.8	0.00
5	2.5	1.00	3.0	1.00	3.0	1.00	3.5	0.80	3.0	0.25	3.5	1.00	3.5	1.00	3.5	1.00	3.0	0.50	2.5	0.50	3.5	0.05
6	3.0	1.00	3.6	1.00	3.6	1.00	4.2	0.80	3.6	0.30	4.2	1.00	4.2	1.00	4.2	1.00	3.6	0.90	3.0	0.50	4.2	0.00
7	3.5	0.80	4.2	1.00	4.2	1.00	4.9	0.80	4.2	0.35	4.9	1.00	4.9	1.00	4.9	0.90	4.2	1.00	3.5	0.40	4.9	0.00
8	4.0	0.60	4.8	1.00	4.8	1.00	5.6	0.75	4.8	0.30	5.6	0.80	5.6	0.80	5.6	0.70	4.8	1.00	4.0	0.30	5.6	0.00
9	4.5	0.45	5.4	0.80	5.4	0.70	6.3	0.50	5.4	0.20	6.3	0.45	6.3	0.60	6.3	0.55	5.4	1.00	4.5	0.20	6.3	0.05
ight Bank	5.0	0.00	6.0	0.00	6.0	0.00	7.0	0.00	6.0	0.00	7.0	0.00	7.0	0.00	7.0	0.00	6.0	0.00	5.0	0.00	7.0	0.00
eature Type	***	ol.	***	vo1		201		001		201	. عبد	vo1		001		ol.	** ~	vol.		ol.	riff	la.
iffle, run, or pool	рс	ol	рс	ool	pc	ool	p	ool	pc	ool	pc	ool	p	ool	po	UI	po	101	po	UI	1111	.IC

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Aaron Ball Date: 10/25/07

WBID# 1218



Site# 1 Photo ID# 18, Downstream



Site# 2 Photo ID# 20, Upstream



Site# 1 Photo ID# 19, Upstream



Site# 2 Photo ID# 21, Downstream

WBID# 1218



Site# 3 Photo ID# 22, Downstream



Site# 3 Photo ID# 23, Upstream